[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0460; Project Identifier MCAI-2020-01620-R]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Airbus Helicopters Model AS355E, AS355F, AS355F1, and AS355F2 helicopters. This proposed AD was prompted by multiple fatigue cracks in power turbine (PT) 3rd stage wheels. This proposed AD would require revising the existing Rotorcraft Flight Manual (RFM) for your helicopter and installing a placard. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to https://www.regulations.gov. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For Airbus Helicopters service information identified in this NPRM, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at

https://www.airbus.com/helicopters/services/technical-support.html. For Rolls-Royce service information identified in this NPRM, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, DE24 8BJ, United Kingdom; phone: +44 (0)1332 242424; fax: +44 (0)1332 249936; or at https://www.rolls-royce.com/contact-us.aspx. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0460; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the European Union Aviation Safety Agency (EASA) AD, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Michael Hughlett, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email michael.hughlett@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2021-0460; Project Identifier MCAI-2020-01620-R" at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to https://www.regulations.gov, including any

personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Michael Hughlett, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email michael.hughlett@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2020-0266, dated December 8, 2020 (EASA AD 2020-0266), to correct an unsafe condition for Airbus Helicopters (AH), formerly Eurocopter, Eurocopter France, Aerospatiale Model AS 355 E, AS 355 F, AS 355 F1, and AS 355 F2 helicopters, all serial numbers, if equipped with Rolls-Royce Corporation (formerly Allison) (RRC) engine Model 250-C20F. EASA advises of multiple fatigue cracks in PT 3rd stage wheels. Investigation has revealed that crack initiation at the hub trailing edge could occur in low-cycle fatigue and progress in high-cycle fatigue up to separation of the blade. According to EASA, RRC has determined that detrimental vibrations could occur within a particular range of turbine speeds, below the normal operating range of this helicopter, which are a potential contributing factor to these failures. This condition, if not addressed, could result in fatigue failure of a PT 3rd stage wheel, and subsequent loss

of engine power, release of debris and damage to the helicopter, and loss of control of the helicopter.

Accordingly, EASA AD 2020-0266 requires revising the Normal Procedures Section of the applicable RFM or RFM supplement, informing flight crews, and installing a placard in full view of both pilots.

FAA's Determination

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA about the unsafe condition described in its AD. The FAA is proposing this AD after evaluating all known relevant information and determining that the unsafe condition described previously is likely to exist or develop on other helicopters of these same type designs.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Airbus Helicopters Alert Service Bulletin No. AS355-71.00.21, Revision 1, dated November 10, 2020. This service information specifies replacing a note with a caution in the Flight Manual to not allow rotor speed to stagnate between 279 and 374 revolutions per minute (RPM) during engine acceleration. This service information also specifies procedures for making and installing a label (placard) for the pilot and co-pilot to avoid 71-95% N2 steady-state speed (avoid operation at 279-374 RPM).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA also reviewed Rolls-Royce Alert Commercial Engine Bulletin A-1400, Revision 7, dated January 10, 2019. This service information specifies the speed avoidance range and operating procedures depending on the PT wheel part number installed.

Proposed AD Requirements in this NPRM

This proposed AD would require revising the existing RFM for your helicopter to replace a note with a caution to not allow rotor speed to stagnate between 279 and 374 RPM. This proposed AD would also require installing a placard to avoid 71-95% N2 steady-state speed (avoid operation at 279-374 RPM).

Differences between this Proposed AD and the EASA AD

EASA AD 2020-0266 requires compliance within 50 flight hours or 30 days, whichever occurs first after the effective date of its AD, whereas this proposed AD would require compliance within 50 hours time-in-service after the effective date of this AD instead.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 29 helicopters of U.S. Registry. Labor rates are estimated at $85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this proposed AD.

Revising the existing RFM for your helicopter would take about 0.25 work-hour for an estimated cost of $21 per helicopter and $609 for the U.S. fleet. Installing a placard would take about 0.25 work-hour and parts would cost a nominal amount, for an estimated cost of $21 per helicopter and $609 for the U.S. fleet.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Airbus Helicopters: Docket No. FAA-2021-0460; Project Identifier MCAI-2020-01620-R.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus Helicopters Model AS355E, AS355F, AS355F1, and AS355F2 helicopters, certificated in any category, with a Rolls-Royce Corporation (formerly Allison) engine Model 250-C20F installed.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 7250, Turbine Section.

(e) Unsafe Condition

This AD was prompted by multiple fatigue cracks in power turbine (PT) 3rd stage wheels. The FAA is issuing this AD to prevent fatigue failure of a PT 3rd stage wheel. The unsafe condition, if not addressed, could result in loss of engine power, release of debris and damage to the helicopter, and loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Within 50 hours time-in-service after the effective date of this AD:

(1) Revise the existing Rotorcraft Flight Manual (RFM) for your helicopter by inserting the page applicable to your helicopter model and version from Appendix 4.A. through D., of Airbus Helicopters Alert Service Bulletin No. AS355-71.00.21, Revision 1, dated November 10, 2020 (ASB AS355-71.00.21 Rev 1). Inserting a different document with information identical to that in Appendix 4.A. through D., of ASB AS355-71.00.21 Rev 1, as applicable to your helicopter model and version, is acceptable for compliance with the requirement of this paragraph. The action required by this paragraph may be performed by the owner/operator (pilot) holding at least a private pilot certificate and must be entered into the aircraft records showing compliance with this AD in accordance with § 43.9(a)(1) through (4) and § 91.417(a)(2)(v). The record must be maintained as required by § 91.417, § 121.380, or § 135.439.

(2) Install a placard in full view of the pilot and co-pilot by following the Accomplishment Instructions, paragraph 3.B., of ASB AS355-71.00.21 Rev 1.

Note 1 to paragraph (g)(2): Airbus Helicopters service information refers to a placard as a label.

(h) Special Flight Permits

Special flight permits are permitted so long as continuous engine operation between 71 and 88% N2 is avoided.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Michael Hughlett, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email michael.hughlett@faa.gov.

(2) For service information identified in this AD, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at https://www.airbus.com/helicopters/services/technical-support.html. You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(3) The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD 2020-0266, dated December 8, 2020. You may view the EASA AD on the Internet at https://www.regulations.gov in Docket No. FAA-2021-0460.

Issued on June 6, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.
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